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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/530,352

06/08/2005

Nicolas Mugnier

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DENNISON, SCHULTZ & MACDONALD  
1727 KING STREET  
SUITE 105  
ALEXANDRIA, VA 22314

EXAMINER

FIORITO, JAMES

ART UNIT

PAPER NUMBER

1793

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/530,352	<b>Applicant(s)</b> MUGNIER ET AL.	
	<b>Examiner</b> JAMES A. FIORITO	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/05</u> .  | 6) <input type="checkbox"/> Other: ____.                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the phrase "typically" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

The term "close to" in claims 1 and 4 is a relative term which renders the claim indefinite. The term "close to" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Regarding claim 1, the phrase "in other words" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

In claim 1 the meets and bounds of limitation "the temperature of the slurry resulting from this mix is greater than a temperature close to the boiling temperature at atmospheric pressure, in other words typically greater than 95 degrees C" are indefinite.

Claim 1 recites the limitation "the Bayer aluminate liquor circuit" in lines 5-6. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the green liquor" in line 5. There is insufficient antecedent basis for this limitation in the claim.<sup>33</sup>

Claim 6 recites the limitation "the green liquor" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the desilicated suspension" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the desilicated autoclave" in line 4-5. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the digester" in line 6. There is insufficient antecedent basis for this limitation in the claim.

In claim 5 the meets and bounds of limitation "bauxite is wet ground at a temperature greater than 95%" are indefinite.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lamerant US 5653947.

Lamerant teaches heating ground bauxite in an aqueous solution comprising sodium hydroxide at a temperature greater than 80 degrees C (Column 3 Lines 65-67). The process involves pre-desilication of the ground bauxite suspended in solution (Column 4 Lines 30-40). The sodium hydroxide used in the process is recycled (Column 4 Lines 29-30).

Claims 1-8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Harato US 5545384.

Harato teaches a process for producing aluminum hydroxide from an alumina-containing a bauxite ore which comprises the steps of: (a) (1) mixing said alumina-containing and reactive silica-containing ore with an alkaline solution to obtain a slurry having a solids content higher than 20% by weight, or (2) mixing said alumina-containing and reactive silica-containing ore with an alkaline solution to obtain a slurry having a solids content higher than 20% by weight and preheating said slurry of (2) at a temperature of 70.degree.-120.degree. C., (b) supplying an alkaline slurry mixture of an aqueous alkaline solution that is preheated to a temperature of 120.degree.-160.degree. C. and said slurry obtained in step (a) to a tube reactor, (c) extracting alumina as sodium aluminate from said alkaline slurry mixture obtained in step (b) in said tube reactor at a temperature of 120.degree.-160.degree. C. and for an extraction time of no

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more than 10 minutes, at an extraction ratio of alumina of not less than about 70% and at a dissolution ratio of reactive silica of not greater than about 70%, to obtain a mixture of an extract solution of sodium aluminate and dissolution residues of reactive silica, (d) separating said dissolution residues from said mixture obtained in step (c), to obtain the extract solution, (e) desilicating said extract solution obtained in step (d) to obtain a mixture of a desilication product and a clear extract solution of sodium aluminate, (f) separating said desilication product from said mixture obtained in step (e), to obtain the clear extract solution, and (g) adding seeds of aluminum hydroxide to said clear extract solution to precipitate aluminum hydroxide (Claim 1).

Claims 1-7 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over McDaniel US 4446117.

McDaniel teaches a process wherein Bauxite is reacted with spent caustic soda solution at 113 degrees C to 205 degrees C to produce a first pregnant liquor stream, a granular residue stream and a muddy substance stream wherein the granular residue stream is discarded, the muddy substance stream is reacted with or without a small portion of bauxite, but with a spent caustic soda stream at 206 degrees C to 350 degrees C to produce a second pregnant liquor stream and a red mud stream which is discarded; the first and second pregnant liquor streams are filtered, cooled to 50 degrees C to 87 degrees C and then seeded to precipitate alumina hydrate. (Abstract)

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6296818, US 5869020, US 2001/0028870, and 2005/0123460 all teach processes of treating bauxite with sodium hydroxide.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES A. FIORITO whose telephone number is (571)272-7426. The examiner can normally be reached on 9am - 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James A Fiorito/  
Examiner, Art Unit 17933

/Wayne Langel/  
Primary Examiner, Art Unit 1793